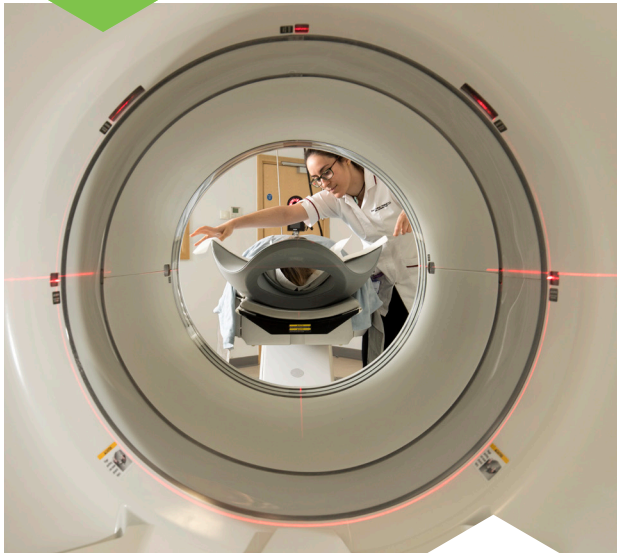


CASE STUDY

HOW REMOTE WORKING HAS HELPED A LEADING RADIOLOGY DEPARTMENT OVERCOME THE CHALLENGE OF A CHANGE IN WORKING PRACTICE AND INCREASE IN IMAGING DEMAND



SUMMARY

The impact of COVID-19 on services at King's College Hospital NHS FT has been significant. One department that played a vital role in the assessment of infected patients while facing an increase in imaging demand was the Radiology department. Staff self-isolation and the need for social distancing presented further challenges. In response to this, KFM worked with the department on an urgent project to successfully enable remote working, and support prompt reporting of imaging while meeting social distancing and self-isolation guidelines during the COVID peak. Initially, 14 workstations were deployed to staff most in need. Subsequently, a total of 48 workstations were installed for remote working within three months

Remote working – meeting the challenge

As soon as social distancing measures and lockdown were introduced to combat the pandemic, the Radiology department had to put in place a plan to ensure timely reporting of images, and allow for enforced isolation of key staff. At the end of March, The Royal College of Radiologists relaxed its guidance on the equipment required for home reporting allowing radiologists to use lossy compression and appropriate off-the-shelf monitors providing the test images could be adequately interpreted. Despite this, the decision was made to deploy full workstations with VPN access as soon as possible.

The department worked with KFM in the first instance to enable staff who were shielding for medical reasons or who were sole providers of a service to report imaging from home with a full workstation. An overriding objective for the project was to increase the resilience of the department in case of a critical number of radiologists needing to shield at the same time. The remote working project initially started out with a target of implementing 14 workstations within a timeframe of two weeks.

Fiona Miller is a Consultant Interventional Radiologist at the Trust. She says: "Much of our work has to be done on site, but reporting of imaging can be undertaken from home. As well as allowing staff who

need to shield or self-isolate to support the workload, enabling all reporters to work from home for a half day would lead to a reduction in radiologists on site by 10-20 per cent and facilitate social distancing while maintaining a radiologist presence to support our clinical colleagues."

Delivering a remote working solution

From a technology perspective, the KFM project management team were faced with a situation where no Trust staff had equipment at home. A further consideration was that all Trust workstations had dedicated and secure access to a part of the Trusts' VPN.

Remote working presented a challenge in terms of connectivity to a fast network and secure access.

Justin Sutton, Radiology IT and Data Manager, KFM says: "The first challenge we faced was that none of our radiologists had NHS equipment at home. After trialling taking one of the machines, putting a VPN client on it and separating it from the network we knew we had connectivity and could proceed installing 14 workstations in two weeks. We then had to work out how to work with the large size of radiology images. Remote working means a reliance on the broadband speeds and bandwidth of the individual's own internet connection."

The team decided to test remote working by removing one workstation from the network. The PC tower, three screens plus an admin screen and microphone for speech to text reporting were all connected via a VPN client installed on the PC and a successful connection was established. Following the successful test, the radiology department identified 14 radiologists who would be working from home and their workstations were installed with remote access.

Fiona says: "From a department perspective, one of the biggest achievements was the collaboration between KFM and the Trust's ICT department. Although there was an initial limit of 14 remote workstations because of network capacity, this has now been extended to 48 workstations."

King's College Hospital NHS FT is one of the UK's largest Trusts and one of London's major trauma centres, so it was important for the project to move swiftly and without disrupting the service. Funding was identified to purchase a further 48 workstations, allowing KFM to successfully install these into homes within three months.

The positive impact of remote working on staff

Fiona says that diagnostic radiologists should ideally be in the department

most of the week. However, spending a half day or perhaps a day working from home while still available to be contacted facilitates a better work-life balance. This adheres to government directives of home working as much as is feasible.

Remote working ideally reduces the number of journeys per week, and the overall reduction of staff on-site facilitates social distancing. Finally, the introduction of new remote workstations meant that if staff needed to self-isolate and were able to continue working, they could do so effectively.

The benefits for the department

"Remote workstations have allowed the department to enhance our service and we have become more resilient to external factors such as a pandemic," says Fiona.

Paul Sidhu, Professor of Imaging Sciences and Consultant Radiologist, was particularly impressed with the speed of the project. Remote working was something that had been in ongoing discussion as part of a standing committee for many years, but the speed of the shift to remote working which KFM was able to deliver took him by surprise.

The change has also helped to improve the department's efficiency. "Our radiologists have been able to cope with a significant increase in the volume of X-rays and specialised CTs that have come through because of an increase in COVID-19 infections.

On a normal day we would have been reporting on around 120 CT scans, 450 X-rays, 40 MRI scans and 200 ultrasound scans. During the pandemic, the patterns changed, allowing the department to maintain a timely reporting service for the specialised imaging and making regular use of remote specialist opinions. In the future, with the continuing growth of imaging, home reporting offers an efficient use of radiologist time and will increase productivity."

Future developments in the pipeline

KFM is currently working to integrate PACS reporting with Guy's and St. Thomas NHS FT. Currently, clinicians have to manually search for images across different trusts. However in the future, this will be done automatically while maintaining patient privacy and limiting the access to clinical teams who need the information to treat a specific patient.

TESTIMONIALS

- This project has helped to accelerate the diagnostics function, which can be critical for some patients and it will create significant efficiencies for the Trust's clinical and administrative teams.

Denis Lafitte, Director of Technology and Innovation, KFM

- I found out about the quarantine whilst in France on the Friday before travelling back. I emailed the KFM team on the Friday and by Monday evening I had the workstation delivered and by the next day I was up and working. The remote access is working beautifully and has meant I've been able to contribute to the

HPB imaging reporting workload to free up my colleagues onsite to perform the interventions. We would have been in a real pickle without this."

Gregory Stephen, Consultant - Radiological Medicine

- Before the beginning of last year the service we were getting was not very good and required a lot of hard work to get anything done, but that has completely changed and we now have a responsive service which has helped us through the pandemic.

Paul Sidhu, Professor of Imaging Sciences and Consultant Radiologist